

## PATENT ABSTRACTS OF JAPAN

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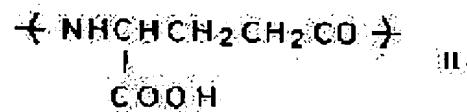
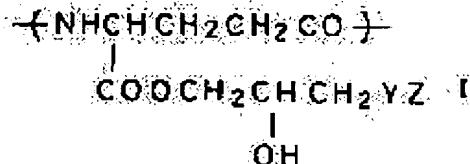
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TAKAGAWA RYOZO(54) POLY- $\gamma$ -GLUTAMIC ACID ESTER AND ITS PRODUCTION

## (57)Abstract:

PURPOSE: To obtain a poly- $\gamma$ -glutamic acid ester having high solubility to general-purpose organic solvents and useful as a film-forming material, etc., by reacting a poly- $\gamma$ -glutamic acid with a monoepoxide compound having epoxy ring on the chain terminal.

CONSTITUTION: A poly- $\gamma$ -glutamic acid produced preferably by fermentation process is dissolved or dispersed in a solvent (e.g. dimethylformamide). The obtained solution or dispersion is incorporated with a monoepoxide compound having epoxy ring on the chain terminal (e.g. glycidyl benzoate and phenyl glycidyl ether) and the mixture is heated at  $\geq 70^{\circ}\text{C}$  (preferably  $\geq 90^{\circ}\text{C}$ ) to effect the reaction of the components and obtain the objective easily handleable poly- $\gamma$ - glutamic acid ester composed of the recurring unit of formula I and the recurring unit of formula II, containing the recurring unit of formula I in an amount of  $\geq 25\text{mol\%}$ , preferably  $\geq 30\text{mol\%}$ , more preferably  $\geq 50\text{mol\%}$  and having a number-average molecular weight of 500–100,000, preferably 500–10,000, more preferably 500–2,000.



## LEGAL STATUS

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